



HBNI

Alumni Webinar

**Friday,
28 August 2026
at 17:00 hrs**

Venue:

**Conference Hall ,
First Floor, New Training
School Complex,
Anushaktinagar,
Mumbai**

Link for : -

YouTube:

[https://youtube.com
/live/ME3icMLIHHQ](https://youtube.com/live/ME3icMLIHHQ)

Webex :

[https://hbni.webex.co
m/hbni/j.php?MTID=
md601c21191297af77e
ea45f23b22feed](https://hbni.webex.com/hbni/j.php?MTID=md601c21191297af77e ea45f23b22feed)

Dr. Geetisubhra Jena

**Marie Skłodowska-Curie Postdoctoral Fellow
Institut de la Corrosion
(French Corrosion Institute),
Brest, France**



"Engineering Advanced Coating Systems: From Marine to Biomedical Applications"

Dr. Geetisubhra Jena is an alumna of Homi Bhabha National Institute (HBNI) and is currently a Marie Skłodowska-Curie Postdoctoral Fellow at the Institut de la Corrosion (French Corrosion Institute), Brest, France. She earned her Ph.D. in Chemistry from HBNI, with her doctoral research carried out at the Indira Gandhi Centre for Atomic Research (IGCAR). Her research focuses on surface engineering, corrosion science, electrochemistry, and multifunctional coatings for marine, automotive, and biomedical applications.

Prior to joining the French Corrosion Institute, she held postdoctoral positions at IIT Madras and North Dakota State University (USA), where she worked on corrosion-resistant, anti-icing, and fouling-release coatings. Her current research focuses on corrosion of metallic implants under physiological conditions and the development of biopolymer-based coatings to enhance implant longevity.

She has authored several peer-reviewed publications and is a recipient of the Marie Skłodowska-Curie Actions Postdoctoral Fellowship, the Marie Curie Seal of Excellence, the AMPP India Chapter Corrosion Awareness Award, and the AMPP EMERG India Scholarship.

Abstract

Surfaces largely determine the performance, durability, and service life of engineering materials. From marine structures exposed to seawater and biofouling to biomedical implants operating within the human body, advanced coatings play a critical role in improving material reliability.

This talk will trace the evolution of multifunctional coating technologies across marine, automotive, and biomedical applications. It will cover corrosion-protective graphene oxide composite coatings, conversion coatings, and advanced polymer coatings with anti-icing and fouling-release properties, highlighting the role of surface chemistry and interfacial interactions in achieving functional performance.

The presentation will also discuss emerging coating strategies for metallic implants, focusing on corrosion resistance, biocompatibility, and biopolymer-based protective coatings for improved implant longevity. Through examples spanning marine and biomedical systems, the talk will demonstrate how innovative surface engineering enables sustainable solutions to real-world engineering challenges.

All are cordially invited for in person attendance